

PA6

TECHNICAL DATA SHEET

FULL NAME: EXTRUDED POLYAMIDE 6

MECHANICAL PROPERTIES	TEST METHOD	UNIT	CONDITION OF SPECIMEN	GUIDELINE VALUE
TENSILE STRENGTH AT BREAK	ISO 527	MPA	DRY	80
	ISO 527	MPA	MOIST	50
ELONGATION AT BREAK	ISO 527	%	DRY	50-100
	ISO 527	%	MOIST	200
MODULUS OF ELASTICITY IN TENSION	ISO 527	MPA	DRY	3000
	ISO 527	MPA	MOIST	1500
CHARPY IMPACT STRENGTH	ISO 179/1EA	KJ/M ²	DRY +23°C	NO BREAK
		KJ/M ²	DRY -40°C	NO BREAK
CHARPY NOTCHED IMPACT STRENGTH	ISO 179/1EA	KJ/M ²	DRY	70
		KJ/M ²	MOIST	
HARDNESS SHORE SCALE D	ISO 868		DRY	75
TIME YIELD LIMIT $t_{1/1000}$	ISO 899	MPA	MOIST +23°C/50% RH	5,5
	ISO 899	MPA	DRY +100°C	2,5
APPARENT MODULUS $E_{c/100020}$	ISO 899	MPA	MOIST +23°C/50% RH	230

THERMAL PROPERTIES				
HEAT DISTORTION TEMPERATURE	ISO 75	°C	DRY – METHOD A	55-75
	ISO 75	°C	DRY – METHOD B	>160
MELTING POINT	ISO 3146	°C	-	220
MAXIMUM SERVICE TEMPERATURE FOR FEW HOURS OPERATION		°C	-	≤180
TEP 5 000 HOURS (50% OF TENSILE STRENGTH) ¹⁾	IEC 216	°C	-	90
TEP 20 000 HOURS (50% OF TENSILE STRENGTH) ¹⁾	IEC 216	°C	-	75
THERMAL COEFFICIENT OF LINEAR EXPANSION	DIN 53452	1/K•10 ⁻⁵	DRY	7-10
THERMAL CONDUCTIVITY (METHOD A)		W/(K•M)	DRY – METHOD A	0,23
SPECIFIC HEAT CAPACITY	IEC 1006	J/(G•K)	DRY	1,7

DIELECTRIC PROPERTIES				
DIELECTRIC CONSTANT	IEC 250	-	DRY - 1 MHz	3,5
	IEC 250	-	MOIST	7
DISSIPATION FACTOR TAN	IEC 250	-	DRY – 1 MHz	0,023
	IEC 250	-	MOIST	0,3
DIELECTRIC STRENGTH	IEC 243	KV/MM	DRY	100
	IEC 243	KW/MM	MOIST	60
VOLUME RESISTIVITY	IEC 93	Ω•CM	DRY	10 ¹⁵
	IEC 93	Ω•CM	MOIST	10 ¹²

D.H. LAMINA S.R.L.

Via Santellone, 29/A • 25080 Molinetto di Mazzano (BS) • Italy
 Tel. +39 (0) 30 21 20 448 • Fax +39 (0) 26 20 813
 Capitale Sociale € 46.800,00 Interamente versato
 C.F. e Nr. Iscr. Registro Imprese 01685670174
 P.I. IT01685670174 • REA BS-262362
 PEC: dhlamina@pec.it • dhlamina@dhlamina.it • www.dhlamina.it

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SURFACE RESISTIVITY R_{0a}	IEC 93	Ω	DRY	10^{13}
	IEC 93	Ω	MOIST	10^{10}
RESISTANCE TO TRACKING	IEC 112	-	DRY/MOIST KA/KB METHOD	KB > 600
	IEC 112	-	DRY/MOIST KC METHOD	KC > 600

MISCELLANEOUS PROPERTIES

MASS DENSITY - METHOD D, E	ISO 1183	g/cm^3	DRY	1,13 – 1,15
MOISTURE ABSORPTION AT 23°C, 50% RH - SATURATION	ISO 1110	%	-	$3,0 \pm 0,4$
WATER ABSORPTION – SATURATION	ISO 62	%	-	$8,0 \pm 0,5$
FIRE PERFORMANCE FLAMEABILITY ACC. VDE	VDE 0304	-	DRY	II B
FIRE PERFORMANCE FLAMEABILITY OF INTERIOR MATERIALS IN PASSANGER CARS H>1 MM	FMVSS 302	MM/MIN	MOIST	< 100
FIRE PERFORMANCE FLAMEABILITY UL STANDARD (THICKNESS OF SPECIMEN 1,6 MM)	UL 94	-	-	HB
RESISTANCE TO WEAR ²⁾	ISO 7148-2	$\mu m/km$	DRY	

REV.	DATE	DESCRIPTION	MODIFIED PARAGRAPHS	WRITTEN BY	APPROVED BY
01	12/2020	LAYOUT UPDATE	//	601.37	601.37

¹⁾ DATAS OF RESIN ONLY

²⁾ MADE BY A PIN / ROTATING DISC TEST ACCORDING DIN-ISO 7148-2 UNDER FOLLOWING CONDITIONS: $R_a = 0,35 - 0,45 \mu m$ (STEEL DISC), $v = 0,3 m/s$, $P = 3 N/mm^2$, TIME $T > 16H$

THIS DATASHEET AND ALL PROPRIETIES INDICATED COME DIRECTLY FROM THE PRODUCER'S STUDIES AND TESTS. D.H. LAMINA S.R.L. DOES NOT PRODUCE THE MATERIAL.

THE CONTENTS OF THIS DATASHEETS ARE MEANT TO GIVE AN OVERVIEW OF THE PRODUCT'S PROPRIETIES. IT REFLECTS OUR CURRENT KNOWLEDGE AND MAY NOT BE COMPLETE. THE VALUES SHOULD BE TAKEN AS GUIDE VALUES BECAUSE THEY ARE DEPENDENT ON SURROUNDING CONDITIONS AND MACHINING METHODS. THE VALUES ARE IN NO WAY A LEGALLY BINDING ASSURANCE OF THE PRODUCT'S PROPRIETIES OR ITS SUITABILITY FOR USE IN A SPECIFIC APPLICATION. ALL STATED VALUES ARE AVERAGE ESTABLISHED FROM MANY INDIVIDUAL TESTS. FOR SPECIFIC APPLICATIONS, WE RECOMMEND DETERMINING SUITABILITY BY MEANS A TRIAL.

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